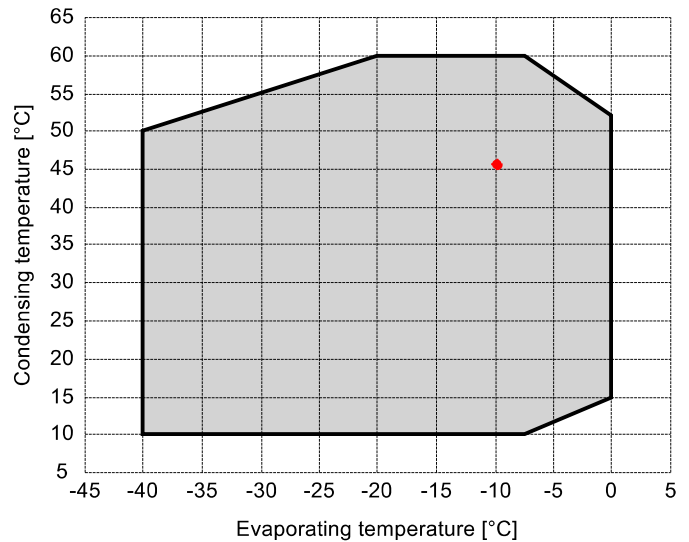


## Input data

Refrigerant	R449A	
Reference temperature	Dew point temperature	
Calculation mode	Refrigeration / Air Cond.	
Operating mode	Subcritical	
Power supply	400/3/50	
Ambient temperature	°C	32
Liquid subcooling	K	3
Liquid temperature	°C	38,63
Evaporating temperature	°C	-10
Evaporating pressure	bar	3,61
Suction gas superheating	K	10
Useful fraction of superheating	%	100



## Output data

<b>Compressor :</b>	<b>LB2-S1052-3Y-2T</b>	
Number of compressors :	FSx1	
Refrigerating capacity	kW	23,649
Condensing temperature (dew point)	°C	45,87
Evaporator capacity	kW	23,649
Power input (with fan)	W	11342
Condenser capacity, theor.	kW	33,491
Current	A	16,81
COP/EER (with fan)	W/W	2,09
Mass flow	kg/h	590
Operating frequency	Hz	50
Connection	-	PWS
Operating mode	-	100%
Discharge temperature	°C	85,12
Ratio (%)	%	100,0%
Note	-	
Oil flow	l/min	-
Heat Exchanged (oil Cooler)	kW	-
Oil Temp. at Oil Cooler Outlet	°C	-
Certified by	-	Frascold

Compliant with EU Ecodesign Directive 2009/125/EC - Regulation EU 2015/1095, at medium temperature (-10 °C).

This unit can't be used with this refrigerant at low temperature (-35 °C) in EU Countries.

Certified by:

- Frascold Data

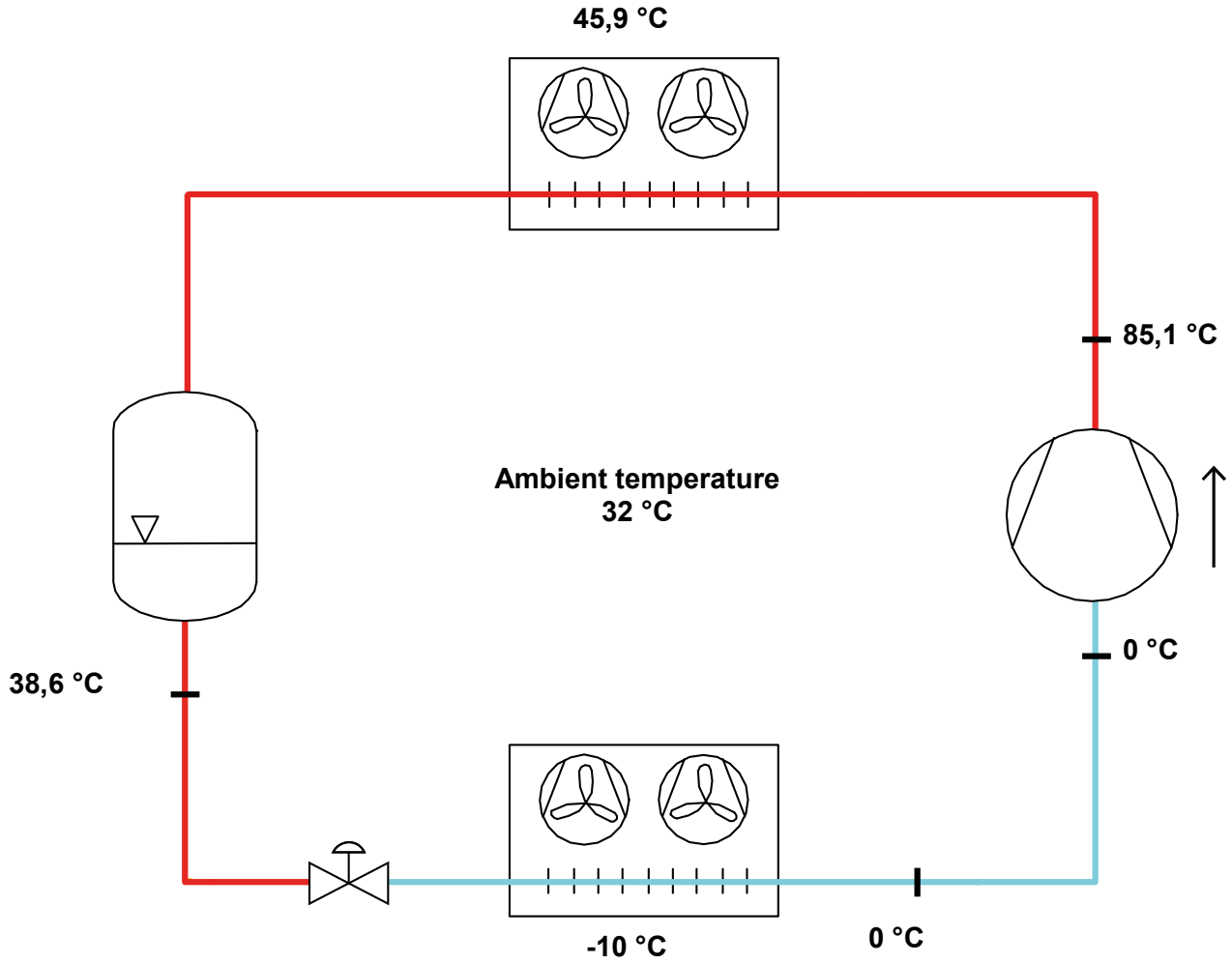


### Legend:

- \*ref: At conditions according to EN12900
- Suction gas temperature = 20 °C
- Liquid subcooling = 0 K

All data subject to change without notice

**P&I Diagram:**



*All data subject to change without notice*

**Model: LB2-S1052-3Y-2T**

Refrigerant: R449A

Power supply: 400/3/50 PWS

**Technical data:**

**Compressor**

Compressor	S10-52Y
Displacement	51,5 m³/h
Nominal compressor speed	1450 rpm
Motor voltage	400 V
Nominal operating frequency	50 Hz
Maximum allowed operating current (MRA)	24,5 A
Locked rotor current (LRA)	59,1 A
Locked rotor current (LRA), DOL	102,29 A
Number of pistons	4
Net weight	120 kg
Lubricant	FRASCOLD POE32
Oil charge	2,9 l
Maximum static pressure LP	20,5 bar
Maximum operating pressure HP	30 bar

**Condenser**

Volume	6,9 l
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**Fan motor**

Number	2
Air flow	16020 m³/h
Power supply	230 - 400/3/50
Max power input (x1)	750 W
Max Current (x1) @400V	1,75 A
Max Current (x1) @230V	3,03 A

**Liquid receiver**

Code	USLR06,6-M
Volume	6,6 l

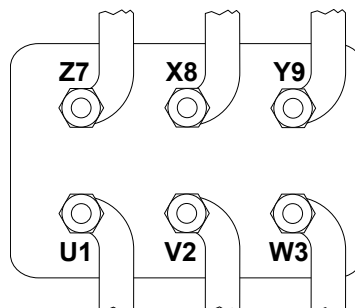
**Net weight**

STANDARD	253 kg
with housing	310 kg

**Sound level:**

\*half sphere model

**Motor connections:**



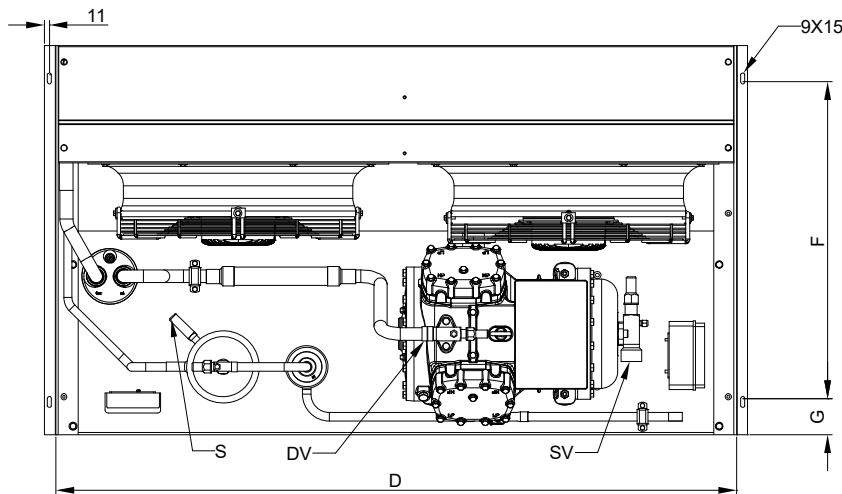
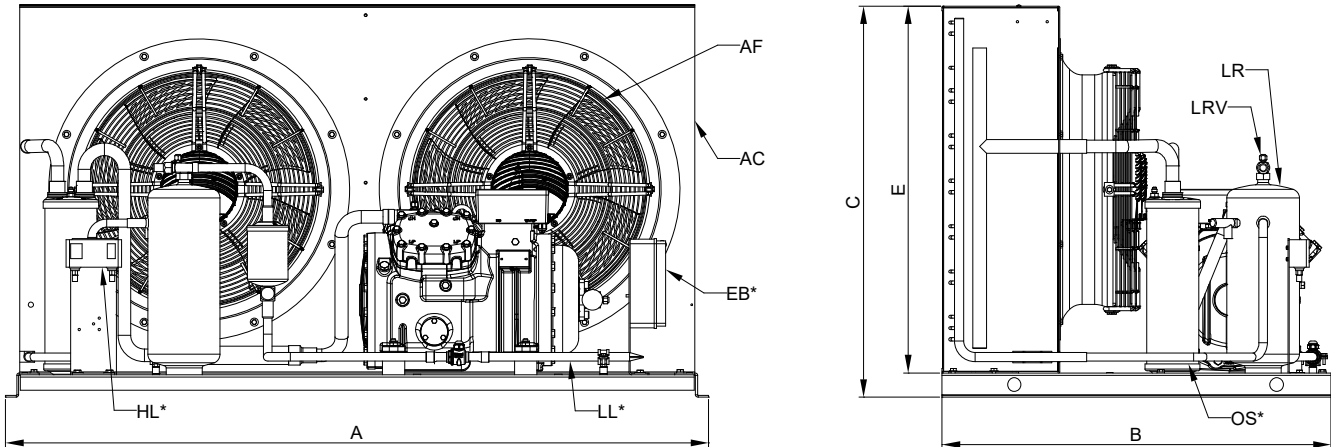
All data subject to change without notice

**Model: LB2-S1052-3Y-2T**

Refrigerant: R449A

Power supply: 400/3/50 PWS

**Dimensions:**



**Legend:**

SV: Suction Valve	35 mm - 1 3/8" in	S: Safety Valve	
LRV: Liquid valve	19 mm - 3/4" in	AC: Condenser	AC Type
A: Length	1556 mm	AF: Fan motor	
B: Width	860 mm	DV: Discharge valve	
C: Height	867 mm	LR: Liquid receiver	
A: Length (with housing)	1556 mm	OS*: Oil separator	
B: Width (with housing)	884 mm	EB*: Electric box	
C: Height (with housing)	888 mm	HL*: High/Low pressure switch	
D: Base length	1504 mm	H*: High pressure switch	
E: Condenser Height	813 mm	LL*: Liquid line	
F: Base mounting	700 mm	*Package	
G: Base mounting	80 mm		

*All data subject to change without notice*

**Model: LB2-S1052-3Y-2T**

Refrigerant: R449A

Power supply: 400/3/50 PWS

**Polynomial coefficients according to EN12900 for S10-52Y:**

\*S = T<sub>evap</sub> ; D = T<sub>cond</sub>

Reference conditions

Refrigerant	R449A
Ambient temperature	32 °C
Suction gas temperature	20 °C
Liquid subcooling	3 K
Frequency	50 Hz

	Refrigerating capacity [W]	Power input [W]
<b>C1</b>	6,529160E+004	1,740630E+003
<b>C2</b>	2,445830E+003	-2,240430E+002
<b>C3</b>	-5,811780E+002	3,066720E+002
<b>C4</b>	3,203010E+001	-6,678100E+000
<b>C5</b>	-1,863440E+001	8,929100E+000
<b>C6</b>	-1,183580E+000	-2,226390E+000
<b>C7</b>	1,429370E-001	-5,100030E-002
<b>C8</b>	-1,854810E-001	5,521640E-002
<b>C9</b>	-1,559340E-002	-1,934400E-002
<b>C10</b>	7,252820E-003	5,493770E-003

$$Y = C1 + C2*S + C3*D + C4*S^2 + C5*S*D + C6*D^2 + C7*S^3 + C8*D*S^2 + C9*S*D^2 + C10*D^3$$

All data subject to change without notice

### Seasonal efficiency calculation according to EU Regulation 2015/1095

Model: LB2-S1052-3Y-2T

Refrigerant: R449A

Item	Symbol	Value		Unit
Evaporating temperature	t	-10	-35	[°C]
Annual electricity consumption	Q	51169	-	[kWh/a]
Seasonal energy performance ratio	SEPR	2,93	-	[-]

#### Parameters at full load and ambient temperature 32°C (Point A)

Rated cooling capacity	P <sub>A</sub>	24,384	-	[kW]
Rated power supply	D <sub>A</sub>	11,317	-	[kW]
<b>Rated COP</b>	<b>COP<sub>A</sub></b>	<b>2,15</b>	-	<b>[-]</b>

#### Parameters at part load and ambient temperature 25°C (Point B)

Declared cooling capacity	P <sub>B</sub>	27,216	-	[kW]
Declared power supply	D <sub>B</sub>	10,827	-	[kW]
<b>Declared COP</b>	<b>COP<sub>B</sub></b>	<b>2,51</b>	-	<b>[-]</b>

#### Parameters at part load and ambient temperature 15°C (Point C)

Declared cooling capacity	P <sub>C</sub>	31,22	-	[kW]
Declared power supply	D <sub>C</sub>	9,95	-	[kW]
<b>Declared COP</b>	<b>COP<sub>C</sub></b>	<b>3,14</b>	-	<b>[-]</b>

#### Parameters at part load and ambient temperature 5°C (Point D)

Declared cooling capacity	P <sub>D</sub>	35,142	-	[kW]
Declared power supply	D <sub>D</sub>	8,849	-	[kW]
<b>Declared COP</b>	<b>COP<sub>D</sub></b>	<b>3,97</b>	-	<b>[-]</b>

#### Parameters at full load and ambient temperature 43°C (Point 3)

Declared cooling capacity	P <sub>3</sub>	20,006	-	[kW]
Declared power supply	D <sub>3</sub>	11,888	-	[kW]
<b>Declared COP</b>	<b>COP<sub>3</sub></b>	<b>1,68</b>	-	<b>[-]</b>

#### Other Items

Capacity control		Fixed		
Degradation coefficient for fixed and staged capacity units	Cdc	0.25		[-]
Power supply		400/3/50		
Fan speed regulation (Rated)	V	Fixed		[V]
Reference temperature		Dew point temperature		
Suction gas temperature	toh	20		[°C]
Subcooling	SC	3		[K]

Declaration of conformity - Directive 2009/125/UE Ecodesign - Condensing units LB2 series: FDEC151